

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A free-space parallel optical interconnect, comprising:

a first module, comprising:

a first die comprising an array of light sources, each light source emitting light; and

a first common collimating lens for directing the light from each light source to a second module; and

the second module, comprising:

a second die comprising an array of detectors; and

a second common collimating lens for directing the light from the light sources to corresponding detectors in the array of detectors.

Claim 2 (original): The interconnect of claim 1, wherein the array of light sources is selected from the group consisting of an array of vertical cavity surface-emitting lasers (VCSELs), an array of edge-emitting lasers, and an array of light emitting diodes (LEDs).

Claim 3 (original): The interconnect of claim 1, wherein the light sources are spaced apart by 50 microns.

Claim 4 (currently amended): The interconnect of claim 1, wherein:

the first die further comprises [[an]] another array of detectors; and

the first common collimating lens further directs light from the second module to said another array of [[the]] detectors.

Claim 5 (currently amended): The interconnect of claim 1, wherein the first module further comprises:

a second die comprising [[an]] another array of detectors; and

the first common collimating lens further directs light from the second module to said another array of ~~[[the]]~~ detectors.

Claim 6 (currently amended): The interconnect of claim 1, wherein the first module further comprises:

a second die comprising ~~[[an]]~~ another array of detectors; and

a ~~second~~ third common collimating lens for directing light from the second module to said another array of ~~[[the]]~~ detectors.

Claim 7 (canceled).

Claim 8 (currently amended): The interconnect of claim ~~[[7]]~~ 1, wherein the array of detectors comprises an array of positive-intrinsic-negative (PIN) photodiodes.

Claim 9 (currently amended): The interconnect of claim ~~[[7]]~~ 1, wherein the detectors are spaced apart by 50 microns.

Claim 10 (currently amended): The interconnect of claim ~~[[7]]~~ 1, wherein:

the second die further comprises a ~~second~~ another array of light sources, each light source emitting light; and

the second common collimating lens further directs the light from ~~the second module~~ said another array of light sources to the first module.

Claim 11 (currently amended): The interconnect of claim ~~[[7]]~~ 1, wherein the second module further comprises:

a third die comprising another array of light sources, each light source emitting light; and

the second common collimating lens further directs the light from ~~the second module~~ said another array of light sources to the first module.

Claim 12 (currently amended): The interconnect of claim ~~[[7]]~~ 1, wherein the second module further comprises:

a third die comprising another array of light sources, each light source emitting light; and

a third common collimating lens for directing the light from ~~the second module~~ said another array of light sources to the first module.

Claim 13 (currently amended): A method for transmitting data in parallel, comprising:

emitting light from each light source in an array of light sources in a first module, wherein the light from each light source carries data; ~~and~~

directing the light from each light source with a first common collimating lens to a second module; and

directing the light from the light sources with a second common collimating lens to corresponding detectors in an array of detectors in the second module.

Claim 14 (currently amended): The method of claim 13, further comprising:

directing light from the second module with a ~~second~~ third common collimating lens to another array of detectors in the first module.

Claim 15 (currently amended): The method of claim 13, further comprising:

directing light from the second module with the first common collimating lens to another array of detectors in the first module.

Claim 16 (canceled).

Claim 17 (currently amended): The method of claim 13, further comprising:

emitting light from each light source in ~~a second~~ another array of light sources in the second module; and

directing the light from ~~the second module~~ said another array of light sources with a ~~second~~ third common collimating lens to the first module.

Claim 18 (currently amended): The method of claim ~~[[11]]~~ 13, further comprising:

emitting light from each light source in ~~a second~~ another array of light sources in the second module; and

directing the light from ~~the second module~~ said another array of light sources with the ~~first~~ second common collimating lens to the first module.